What is claimed is:

1. A semiconductor device having a semiconductor circuit comprising a semiconductor element, said semiconductor element comprising:

an active layer comprising a crystalline semiconductor film formed on a surface having an insulating property;

a first insulating film formed in contact with an upper surface of said active layer;

a second insulating film formed in contact with a side surface of said active layer and in contact with an upper surface and a side surface of said first insulating film; and

a gate wiring having a multi-layer structure formed in contact with an upper surface of said second insulating film.

2. A device according to claim 1, wherein said crystalline semiconductor film is formed by a process comprising the steps of:

adding an material for promoting crystallization to an initial semiconductor film; and

crystallizing said initial semiconductor film without melting, by irradiating an infrared ray or an ultraviolet ray through said first insulating film.

3. A device according to claim 2, wherein said material is at least one selected from the group consisting of Ni, Fe, Co, Pt, Cu, Au and Ge.

4. A device according to claim 1, wherein said initial semiconductor film comprises a semiconductor film having an

amorphous substance or a semiconductor film having a microcrystalline substance.

5. A device according to claim 1, wherein a concentration of an impurity at an interface between said first insulating film and said active layer is lower than a concentration of an impurity at an interface between said first insulating film and said second insulating film.

6. A device according to claim 1, wherein said gate wiring having a multi-layer structure comprises at least one layer mainly comprising an element selected from said group consisting of aluminum, tantalum, molybdenum, titanium, chromium and silicon.

7. A device according to claim 1,

wherein said gate wiring has a multi-layer structure comprising a first conductive film having laminated thereon a second conductive film, and

wherein said first conductive film comprises tantalum or a material mainly comprising tantalum and said second conductive film comprises aluminum or a material mainly comprising aluminum.

8. A device according to claim 1, wherein said first insulating film has a film thickness of from 1 to 50 nm.

9. A device according to claim 1, wherein said second insulating film has a film thickness of from 100 to 200 nm.

10. A device according to claim 1, wherein said active layer comprises a source region, a drain region and a channel forming region formed between said source region and said drain region.

11. A device according to claim 10, wherein at least a part of said source region and said drain region comprises a silicide.

12. A device according to claim 10, wherein an impurity giving an N-type conductivity is added to said source region and said drain region.

13. A device according to claim 10, wherein an impurity giving an N-type conductivity and an impurity giving a P-type conductivity are added to said source region and said drain region.

14. A device according to claim 10, wherein said channel forming region contains a material for promoting crystallization, and wherein a concentration of said material in said source region and said drain region is higher than said channel forming region.

15. A semiconductor device having a semiconductor circuit comprising a semiconductor element, said semiconductor element comprising:

an active layer comprising a crystalline semiconductor film formed on a surface having an insulating property;

a first insulating film formed in contact with an upper surface of said active layer;

a second insulating film formed in contact with a side surface

of said active layer and in contact with an upper surface and a side surface of said first insulating film; and

a gate wiring having a multi-layer structure formed in contact with an upper surface of said second insulating film,

wherein said second insulating film has a film thickness thicker than said first insulating film.

16. A device according to claim 15, wherein said crystalline semiconductor film is formed by a process comprising steps of:

adding an material promoting crystallization to an initial semiconductor film; and

crystallizing said initial semiconductor film without melting, by irradiating an infrared ray or an ultraviolet ray through said first insulating film.

17. A device according to claim 16, wherein said material is at least one selected from the group consisting of Ni, Fe, Co, Pt, Cu, Au and Ge.

18. A device according to claim 15, wherein said initial semiconductor film comprises a semiconductor film having an amorphous substance or a semiconductor film having a microcrystalline substance.

19. A device according to claim 15, wherein a concentration of an impurity at an interface between said first insulating film and said active layer is lower than a concentration of an impurity at an interface between said first insulating film and said second insulating

film.

20. A device according to claim 15, wherein said gate wiring having a multi-layer structure comprises at least one layer mainly comprising an element selected from said group consisting of aluminum, tantalum, molybdenum, titanium, chromium and silicon.

21. A device according to claim 15, wherein said gate wiring has a multi-layer structure comprising a first conductive film having laminated thereon a second conductive film,

wherein said first conductive film comprises tantalum or a material mainly comprising tantalum, and

wherein said second conductive film comprises aluminum or a material mainly comprising aluminum.

22. device according to claim 15, wherein said first insulating film has a film thickness of from 1 to 50 nm.

23. A device according to claim 15, wherein said second insulating film has a film thickness of from 100 to 200 nm.

24. A device according to claim 15, wherein said active layer comprises a source region, a drain region and a channel forming region formed between said source region and said drain region.

25. A device according to claim 24, wherein at least a part of said source region and said drain region comprises a silicide.

26. A device according to claim 24, wherein an impurity giving an N-type conductivity is added to said source region and said drain region.

27. A device according to claim 24, wherein an impurity giving an N-type conductivity and an impurity giving a P-type conductivity are added to said source region and said drain region.

28. A device according to claim 24, wherein said channel forming region contains an material promoting crystallization, and wherein a concentration of said material in said source region and said drain region is higher than said channel forming region.

29. A method for manufacturing a semiconductor device comprising steps of:

contacting a material for promoting crystallization to at least a part of an underlayer film having an insulating surface;

continuously forming an initial semiconductor film and a first insulating film on said underlayer film;

crystallizing said initial semiconductor film by irradiating an infrared ray or an ultraviolet ray through said first insulating film, to obtain a crystalline semiconductor film;

patterning said crystalline semiconductor film and said first insulating film to match an end surface of said initial semiconductor film and an end surface of said first insulating film;

forming a second insulating film to cover said crystalline semiconductor film and said first insulating film; and

forming a gate wiring having a multi-layer structure on said

second insulating film.

30. A method according to claim 29, wherein said step of forming said gate wiring having a multi-layer structure comprises steps of:

forming a first metallic film on said second insulating film;

forming a second metallic film in contact with said first metallic film;

patterning said second metallic film to form a second wiring layer comprising said second metallic film on said first metallic film;

applying a voltage to said first metallic film to conduct anodic oxidation of said second wiring layer and anodic oxidation of said first metallic film; and

selectively removing an anodic oxidation film of said first metallic film to form a first wiring layer.

31. A method according to claim 29, further comprising a step of adding an impurity ion giving a conductive type to said crystalline semiconductor film through said first insulating film and said second insulating film.

32. A method according to claim 29, wherein said crystalline semiconductor film is obtained without melting said initial semiconductor film during said step of crystallizing said initial semiconductor film.

33. A method for manufacturing a semiconductor device comprising steps of:

contacting a material for promoting crystallization to at least a part of an underlayer film having an insulating surface;

continuously forming an initial semiconductor film and a first insulating film on said underlayer film;

crystallizing said initial semiconductor film by irradiating an infrared ray or an ultraviolet ray through said first insulating film, to obtain a crystalline semiconductor film;

patterning said crystalline semiconductor film and said first insulating film to match an end surface of said initial semiconductor film and an end surface of said first insulating film;

forming a second insulating film to cover said crystalline semiconductor film and said first insulating film;

forming a gate wiring having a multi-layer structure on said second insulating film;

conducting doping of a phosphorous element to a region to be a source region and a drain region; and

gettering said material for promoting crystallization by conducting a heat treatment.

34. A method according to claim 33, wherein said step of forming said gate wiring having a multi-layer structure comprises steps of:

forming a first metallic film on said second insulating film;

forming a second metallic film in contact with said first metallic film;

patterning said second metallic film to form a second wiring layer comprising said second metallic film on said first metallic film;

applying a voltage to said first metallic film to conduct

anodic oxidation of said second wiring layer and anodic oxidation of said first metallic film; and

selectively removing an anodic oxidation film of said first metallic film to form a first wiring layer.

35. A method according to claim 33, further comprising a step of adding an impurity ion giving a conductive type to said crystalline semiconductor film through said first insulating film and said second insulating film.

36. A method according to claim 33, wherein said crystalline semiconductor film is obtained without melting said initial semiconductor film during said step of crystallizing said initial semiconductor film.

37. A method for manufacturing a semiconductor device comprising steps of:

continuously forming an initial semiconductor film and a first insulating film over a substrate; and

crystallizing said initial semiconductor film by irradiating an infrared ray or an ultraviolet ray through said first insulating film.

38. A method according to claim 37 further comprising steps of:

patterning said crystalline semiconductor film and said first insulating film to match an end surface of said initial semiconductor film and an end surface of said first insulating film; and

forming a second insulating film to cover said patterned crystalline semiconductor film and said patterned first insulating film.

39. A method according to claim 37, further comprising a step of:

contacting a material for promoting crystallization to at least a part of an underlayer film over said substrate.

40. A method according to claim 37, further comprising a step of adding an impurity ion giving a conductive type to said crystalline semiconductor film through said first insulating film and said second insulating film.

41. A method for manufacturing a semiconductor device comprising steps of:

continuously forming an initial semiconductor film and a first insulating film over a substrate;

crystallizing said initial semiconductor film by irradiating an infrared ray or an ultraviolet ray through said first insulating film, to obtain a crystalline semiconductor film; and

patterning said crystalline semiconductor film and said first insulating film to match an end surface of said initial semiconductor film and an end surface of said first insulating film.

42. A method according to claim 41, further comprising a step of:

forming a second insulating film to cover said patterned crystalline semiconductor film and said patterned first insulating film.

43. A method according to claim 41, further comprising a step of:

contacting a material for promoting crystallization to at least a part of an underlayer film over said substrate.

44. A method according to claim 41, further comprising a step of adding an impurity ion giving a conductive type to said crystalline semiconductor film through said first insulating film and said second insulating film.